

REMARKS

Examiner Interview

Applicants thank the Examiner for the courtesy extended to the undersigned during an Examiner interview on April 12, 2005. Applicants acknowledge receipt of and thank the Examiner for the Interview Summary sheet provided to the undersigned directly after the interview of April 12, 2005.

Applicants have amended the claims in accordance with the discussion of the Examiner Interview.

Further, as agreed, Applicants file an RCE concurrently with this Amendment to allow the Examiner to update her search.

Amendment Of Drawings and Specification

Applicants concurrently file herewith a request for drawing corrections. The amended drawings are renumbered in order to eliminate duplicate numbering and drawing identification is changed on some drawings.

FIG. 7-2 has been amended to correct an incorrect drafting line intersection.

The amendments to the specification are consistent with the drawings. The specification is also amendment to correct typographical error and correct duplicate identifications and references to equipment, streams and process elements.

Status of Claims

Applicants respectfully request entry of this amendment. Upon entry of this amendment Claims 23-54 will be pending in this application. Claims 23, 34, 50 and 51 are amended herein. The independent claims are 23 and 34. No new matter is added by this amendment.

Maintenance of Previous Traverse

Applicants respectfully maintain the traverse set forth in the Amendment Under 37 C.F.R. § 1.111, filed on October 12, 2004. Additional remarks in traverse and consistent with the discussion of the Examiner Interview are provided herein.

Response To Claim Objections

Claims 23, 34, 50 and 51 stand objected to as allegedly lacking the conjunction “and”. Claims 23, 34, 50 and 51 are amended herein to recite “and”.

Response To Claim Rejections Under 35 U.S.C. § 112

Claims 25-54 stand rejected under 35 U.S.C. § 112, ¶ 1 as allegedly lacking support in the specification for the recitation “operating temperature about 1500°F or lower”.

Applicants respectfully traverse, in that the specification and examples provide a number of operating temperatures for the claimed reactor system which are below 1500 °F. However, in order to advance the prosecution of this application, Claims 23 and 34 have been amended to

recite:

“having an operating temperature in a range of about 50 to about 1500°F”.

In view of the above, Applicants respectfully request the withdrawal of the rejection of claims 25-54 under 35 U.S.C. § 112, ¶ 1.

Response To Claim Rejections Under 35 U.S.C. § 102(b) and 103(a)

Claims 34, 35, 38, 40-46, and 51 stand rejected under 35 U.S.C. 102(b) over Hoekstra ‘751. Claims 23-30, 35-37 and 50 stand rejected under 35 U.S.C. 102(b), or in the alternative, under 35 U.S.C. 103(a) over Hoekstra ‘751. Claims 31-33 and 47-49 stand rejected under 35 U.S.C. 103(a) as obvious over Hoekstra ‘751 in view of U.S. Patent 3,960,700 to Rosen *et al* (Rosen ‘700). Claims 39 and 54 are rejected under 35 U.S.C. 103(a) over Hoekstra ‘751. Claims 52 and 53 are rejected under 35 U.S.C. 103(a) over Hoekstra ‘751 in view of U.S. 2,614,069 over Matheson (Matheson ‘069).

Applicants respectfully traverse all rejections under 35 U.S.C. 102(b) and 35 U.S.C. 103(a).

Applicants’ amended independent claim 23 recites in-part:

... A reactor system for converting a tar sand feed ...

said reactor having a feed inlet for a fluidizable feed comprising a tar sand comprising a bitumen,

said reactor having a fluidizing medium inlet for a gas comprising hydrogen, said fluidizing medium in contact with said fluidizable feed forms a fluidized feed,

said fluidized feed forming said fluidized bed in which said fluidized bed comprises at least said fluidized feed, ...

said reactor having an operating temperature in a range of about 50°F to about 1500°F ...

Hoekstra '751 does not appear to disclose "tar sand" as recited by Applicants in claim 23.

Further, Hoekstra '751 does not disclose "said fluidized feed forming said fluidized bed in which said fluidized bed comprises at least said fluidized feed" as claimed by Applicants.

Additional remarks distinguishing Applicants' claimed invention over Hoekstra '751 are provided below.

Applicants' independent claim 34 recites in part:

... said reactor having a fluidizing medium inlet for a gas comprising hydrogen, said fluidizing medium in contact with said fluidizable feed forms a fluidized feed,

said fluidized feed forming said fluidized bed in which said fluidized bed comprises at least said fluidized feed, ...

As discussed above, the reactor of Hoekstra is a different type of reactor. Hoekstra '751 discloses a reactor having a catalyst bed which is confined to a reaction zone. Hoekstra '751 discloses:

Before carrying out the process, a particulate, fluidizable hydrogen catalyst is first delivered to the reaction zone. This hydrogenation catalyst should have a particle size range which is sufficiently small to permit the catalyst to be fluidized, yet sufficiently large so that the catalyst will not be carried out of the reaction zone by the upwardly moving stream of hydrogen gas. (see Hoekstra '751, col. 2, lines 12-18).

Further, Hoekstra '751 discloses:

After the reaction zone has been charged with a hydrogenation catalyst, ... (see Hoekstra '751, col. 2, lines 35-36).

Further:

Of course the upward flow of hydrogen must not be at a rate that is so high that any significant amount of catalyst is carried upwardly out of the reactor (see Hoekstra '751, col. 3, lines 1-4).

Hoekstra '751 discloses a reactor having a catalyst bed contained in the reaction zone.

Further, the catalyst bed is designed to avoid catalyst migration from the bed, i.e. "This hydrogenation catalyst should have a particle size range ... sufficiently large so that the catalyst will not be carried out of the reaction zone ..." (see Hoekstra '751, col. 2, lines 12-18). In addition to teaching a reactor with a catalyst bed contained in a reaction zone and of particles large enough not to migrate, Hoekstra '751 teaches the operation of the reactions to preserve the containment of the catalyst bed, i.e., "the upward flow of hydrogen must not be at a rate that is so high that any significant amount of catalyst is carried upwardly out of the reactor" (see Hoekstra '751, col. 3, lines 1-4)

Differently, Applicants reactor does not employ a catalyst bed as disclosed by Hoekstra '751. Applicants reactor design is of a different technology and does not require a contained (or fixed) catalyst bed. As suggested by the Examiner during the Examiner interview, Applicants have amended the independent claims to affirmatively recite that the claimed reactor does not have a contained catalyst bed which is the same as disclosed by Hoekstra '751. Accordingly, Applicants recite the following in each of independent claims 23 and 34:

... a fluidized bed reactor free of a contained catalyst bed ...

Applicants' claimed invention is distinguished over Hoekstra '751, as well as Hoekstra '751 in view of Rosen '700 or Matheson '069 either considered separately, or together. Hoekstra does not disclose all claimed elements of applicants claimed invention as recited in claims 23-54. Therefore, no case of anticipation exists under 35 U.S.C. 102(b) and Applicants respectfully request the withdrawal of all rejections under 35 U.S.C. 102(b).

Hoekstra '751's deficiencies in disclosure are not cured by consideration of Rosen '700 or Matheson '069, either separately, or together. None of the cited references considered separately, or together, teach or disclose all claimed elements of applicants claimed invention as recited in claims 23-54. Thus, no *prima facie* case of obviousness exists under 35 U.S.C. 103(a). Applicants respectfully request the withdrawal of all rejections of claims 23-54 under 35 U.S.C. 103(a).

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully assert that all current rejections be withdrawn and assert that all pending claims are allowable and request reconsideration and the allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this amendment, or credit any overpayment, to Deposit Account No. 13-4500, Order No. 3495-7000US3. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,

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Dated: May 23, 2005

By: _____


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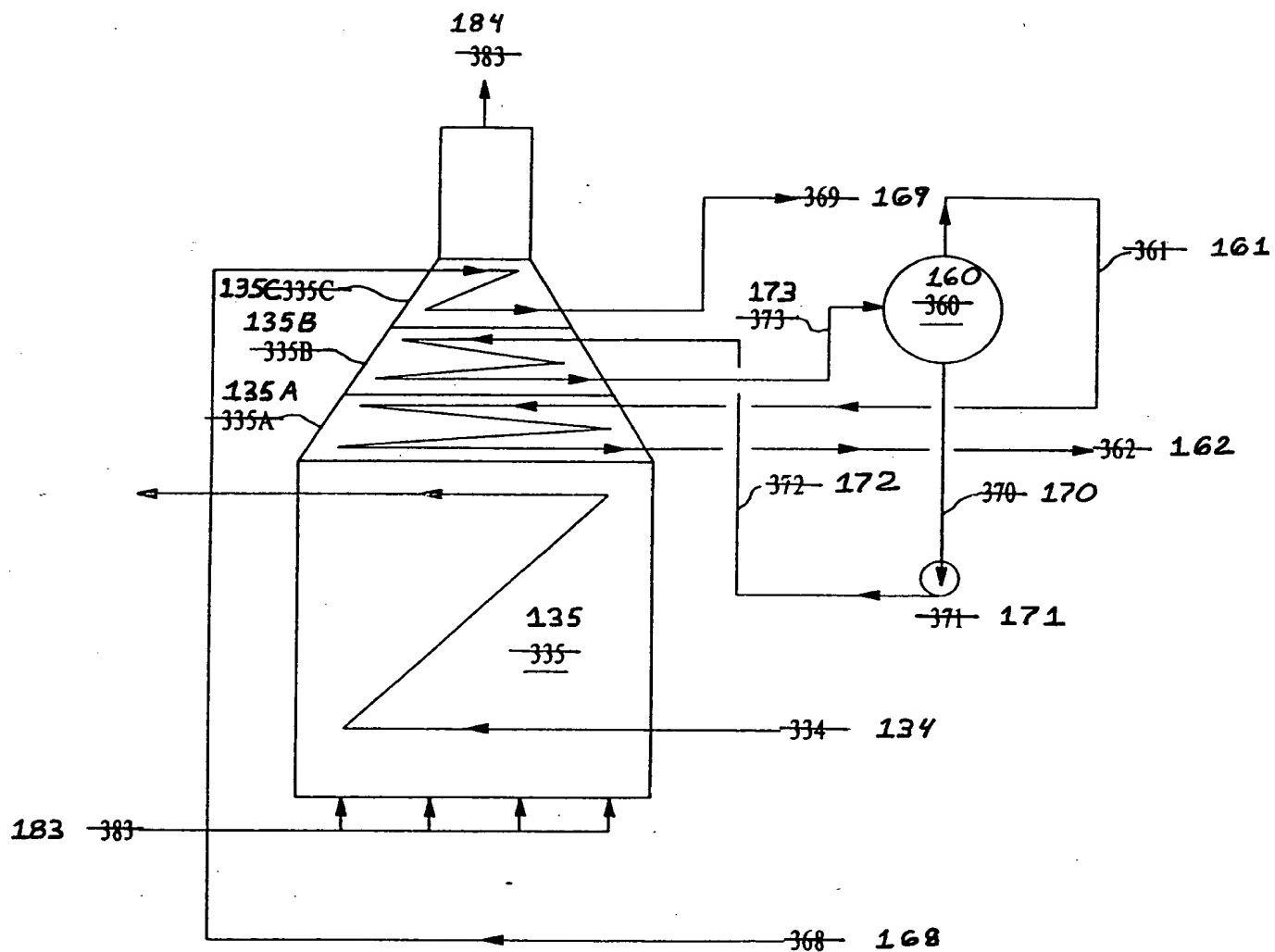


FIG. 3

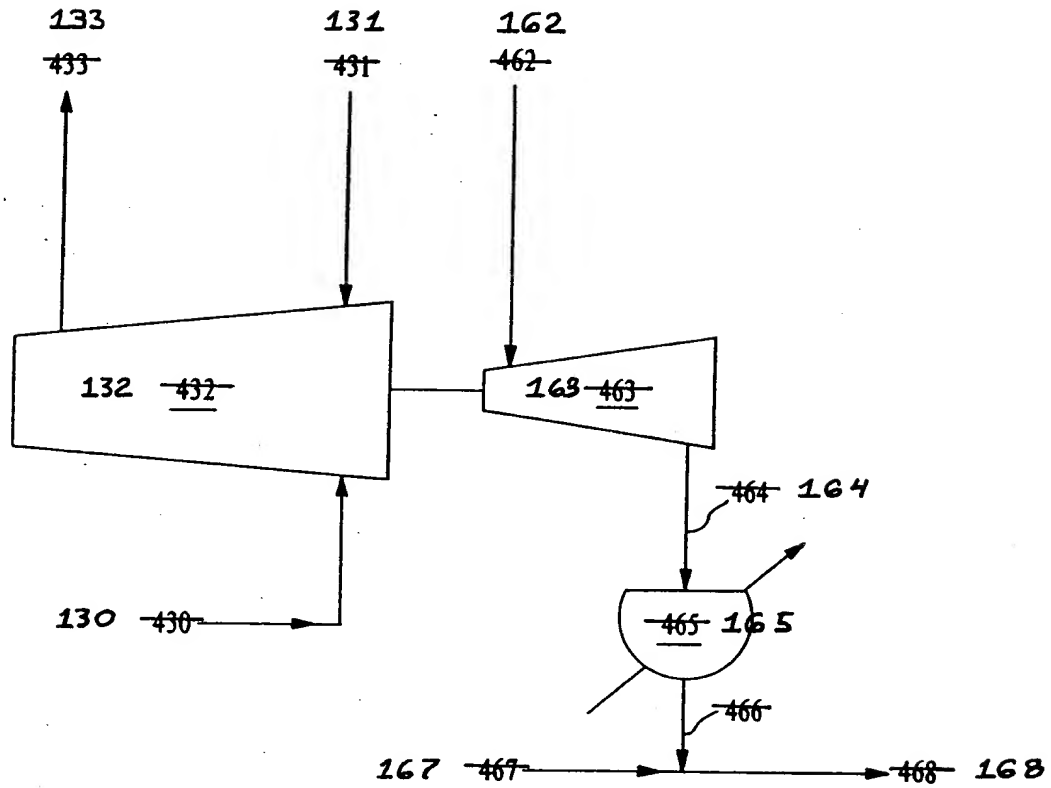


FIG. 4

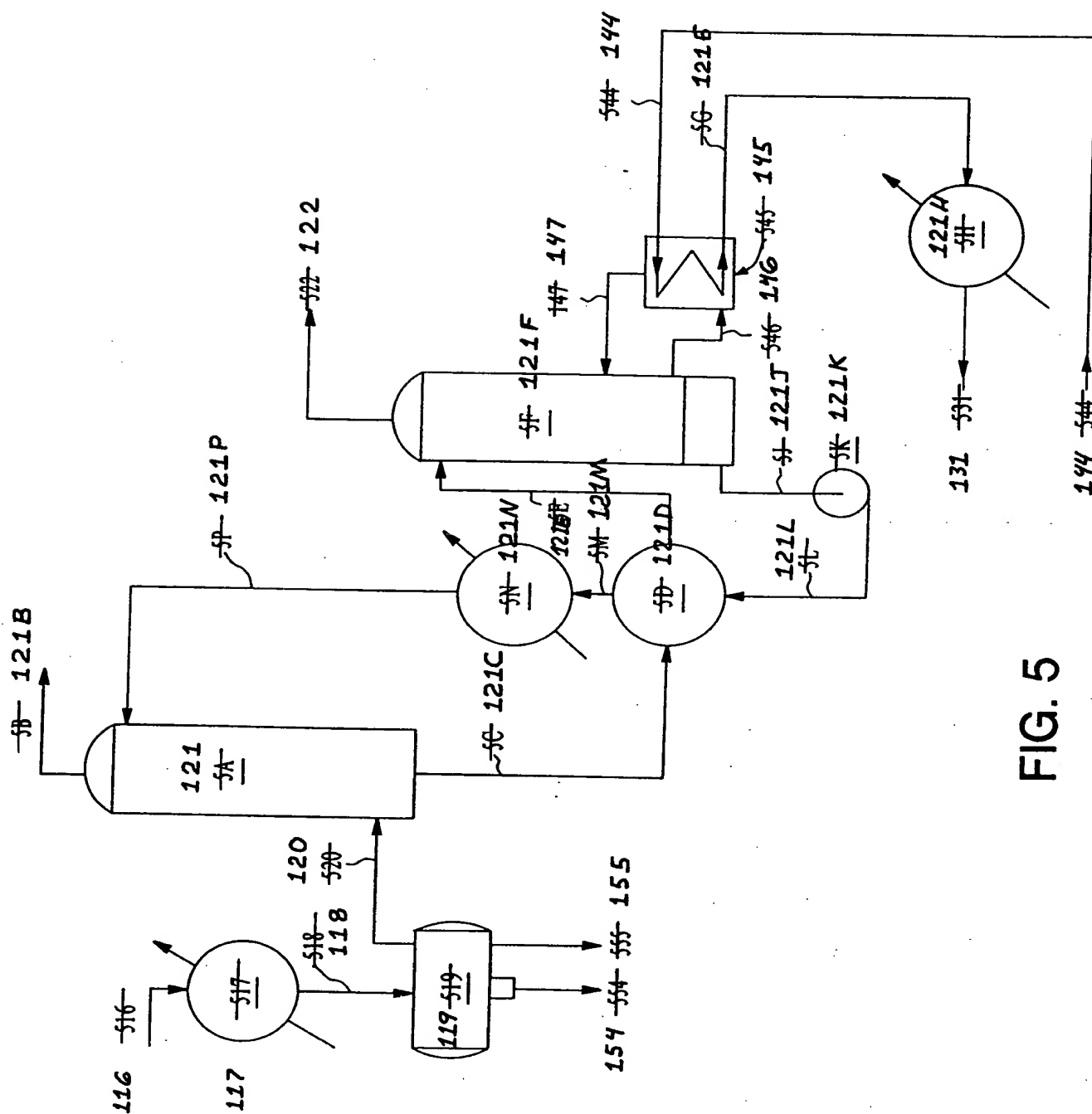
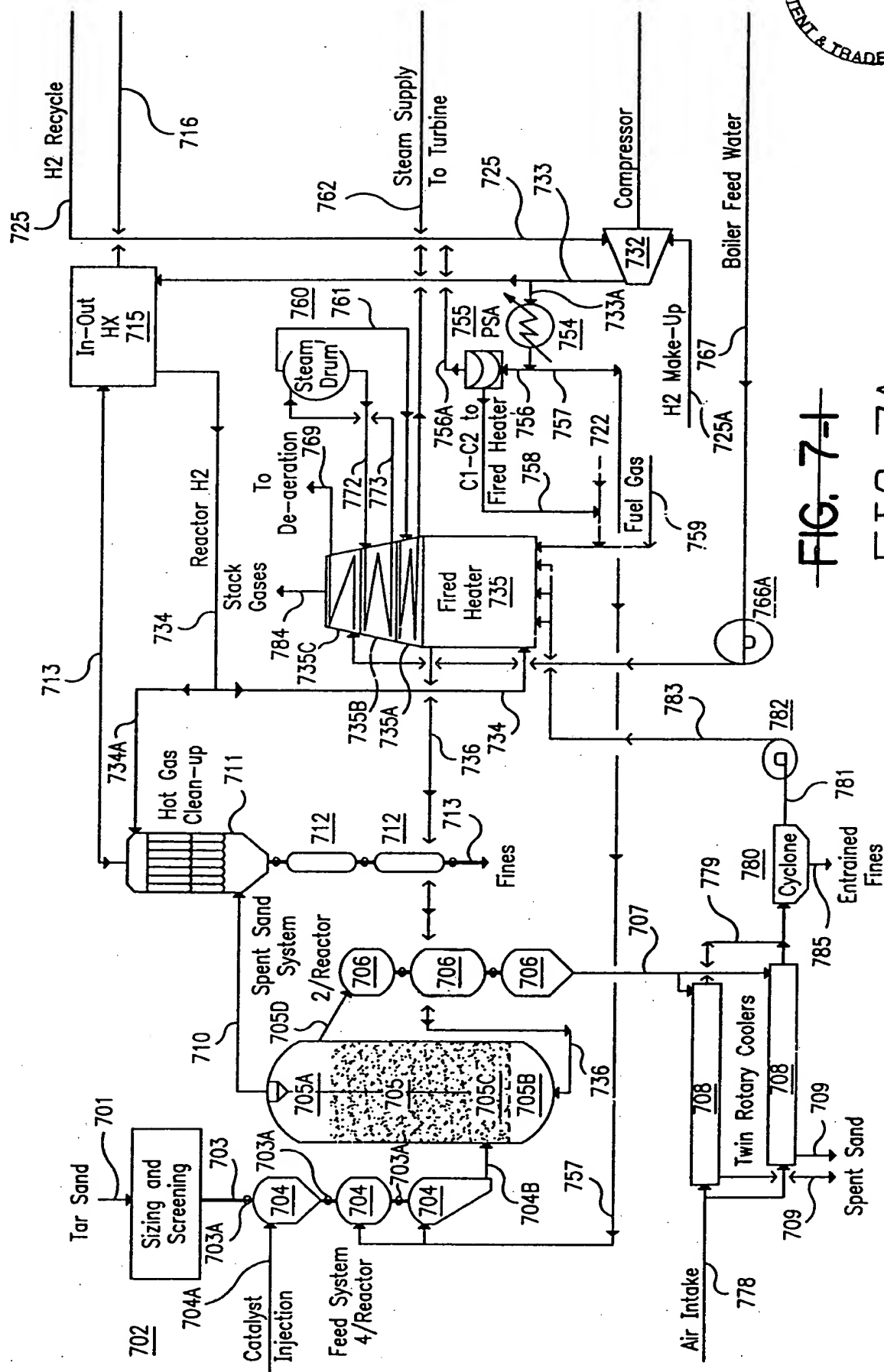
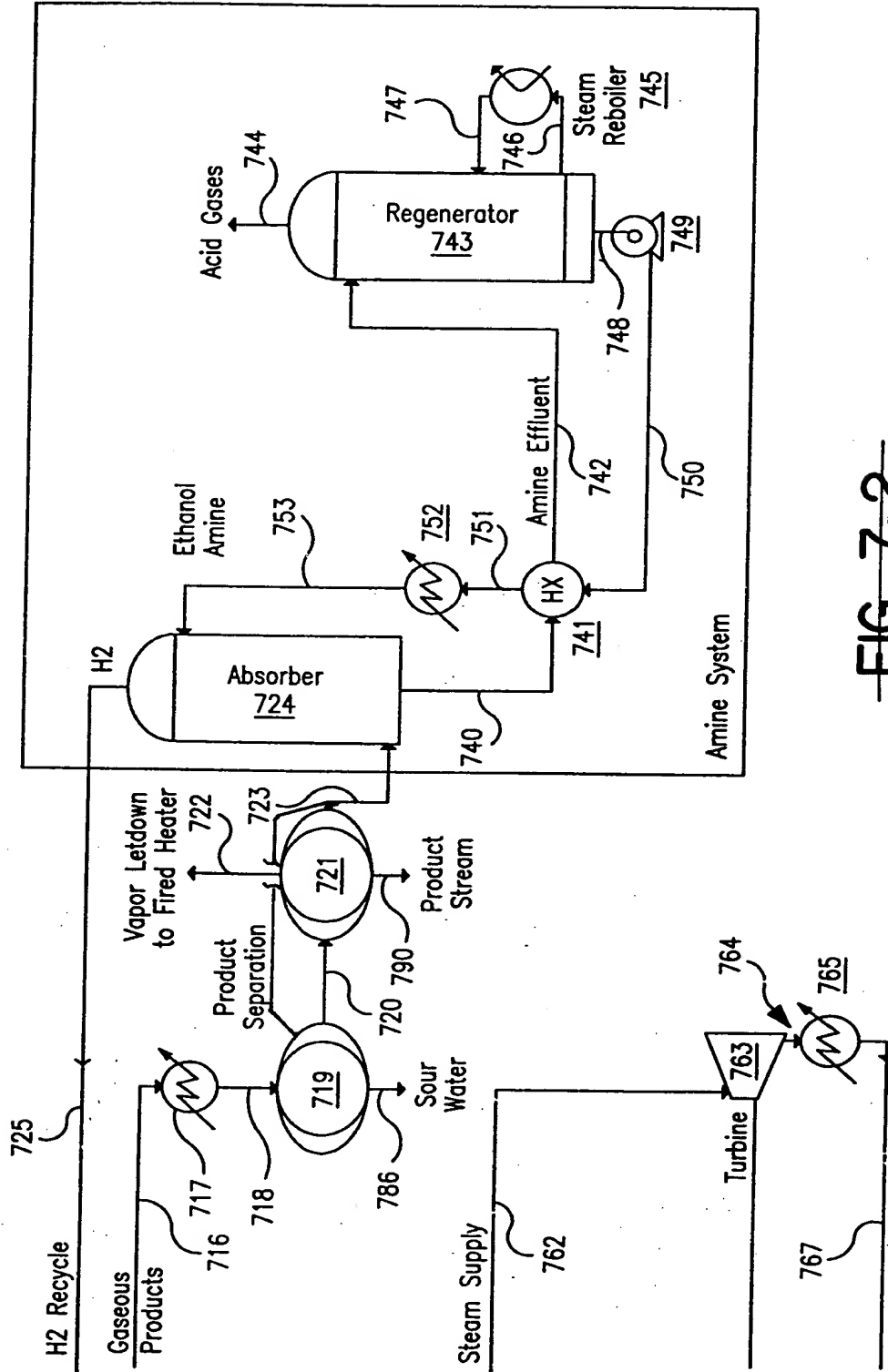
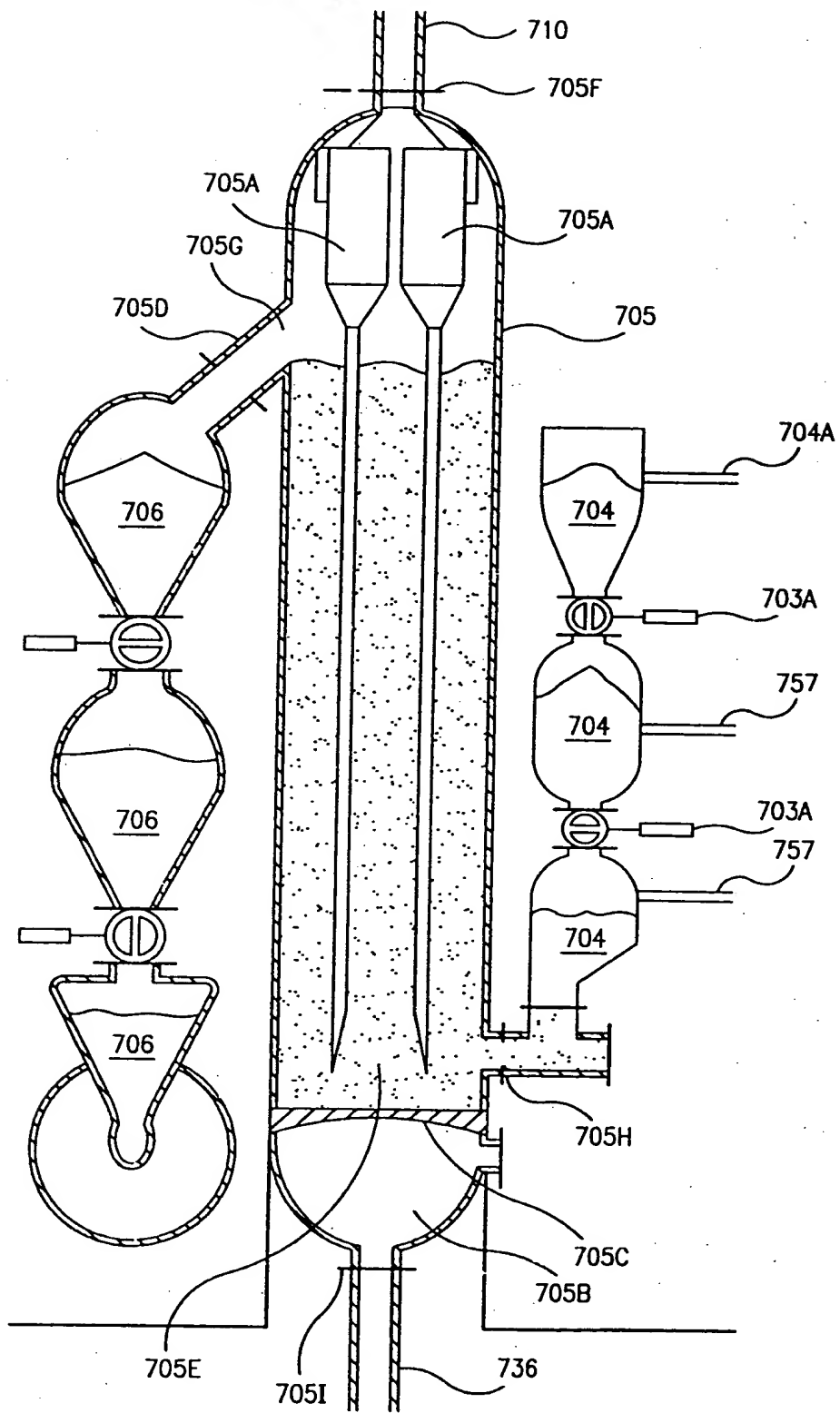


Fig. 5





~~FIG. 7-2~~
FIG. 7B



~~FIG. 8~~
FIG. 7C